

location meets the location requirements for integral magazines. The cofferdam requirement of paragraph (a)(3) of this section is considered as fulfilled if the van is of steel construction. Holds so utilized shall not be used for stowage of other hazardous materials covered by 49 CFR parts 171-179. The stowage of other explosives or oxidizing materials in the same hold is permitted in accordance with the requirements of 49 CFR part 176.

(c) *Magazine chests.* (1) Magazine chests shall be located on the weather decks in a position suitable for jettisoning the contents.

(2) Magazine chests shall be set off at least 4 inches from decks and deckhouse.

(3) Magazine chests shall not be located within 15 feet of ventilation terminals emitting warm air or hazardous vapors, such as from galleys and pump-rooms.

(4) Magazine chests intended for the stowage of blasting caps, detonators, or boosters, in addition to the requirements in this paragraph, shall not be stowed within 10 feet of any unshielded radio apparatus or antenna leads.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.10-10 Integral magazine construction.

(a) Magazines shall be of permanent watertight construction. Bulkheads and decks, including the deck overhead, which are common with store-rooms or workshops shall be of A-15 construction as defined by § 72.05-10 of Subchapter H (Passenger Vessels) of this chapter. Flush construction shall be employed where practicable.

(b) Where the shell or unsheathed weather decks form boundaries of the magazine spaces suitable approved incombustible thermal insulation shall be provided to prevent condensation of moisture.

(c) Where a tank top forms the magazine deck it shall be insulated with an approved deck covering to prevent condensation of moisture. Tank top man-holes shall not be installed in magazines.

(d) Light fixtures shall be of an approved type equipped with globes and

guards. Control of the lighting system shall be from a location external to the magazine. An indicator light shall be provided at the switch location to indicate when the lighting circuits are energized. Other electrical equipment and wiring shall not be installed within or pass through the magazine. Electrical cables enclosed in a watertight trunk are permitted.

(e) Piping, other than fresh or salt water service and drainage system, shall not be routed through magazines except as required for the magazines themselves. Other piping systems enclosed in a watertight trunk are permitted.

(f) Access doors for the magazine, or magazine groups, shall be of substantial watertight construction and be provided with means whereby they may be securely locked.

(g) Racks, stanchions, battens, and other devices shall be installed to provide rigid and safe stowage of explosives in their approved shipping containers with a minimum of dunnage.

(h) Decks shall be covered with a permanent nonslip nonspark covering.

§ 194.10-15 Magazine van construction.

(a) Vans shall be of substantial metal construction. Their interior shall be insulated with an approved incombustible insulation to the standards required for A-15 divisional bulkheads as prescribed in part 72 of Subchapter H (Passenger Vessels) of this chapter. The interior shall be lined flush with incombustible materials.

(b) Lighting fixtures, if installed, shall be of an approved type equipped with globes and guards. All electrical installations shall meet the applicable requirements of Subchapter J (Electrical Engineering) of this chapter. The electrical terminals for connections to the ship's electrical system shall be of watertight construction and bear a label plate denoting the power requirement of the van.

(c) Access doors and ventilation closures shall be of watertight construction. Doors shall be provided with means whereby they may be securely locked.

(d) Vans shall be provided with suitable pads and clips for securing to the

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deck and for installation of wire rope sway braces.

(e) Vans shall bear a label plate stating light weight, gross weight and weight of explosives. Gross weight shall not exceed 250 pounds per square foot of deck area.

§ 194.10-20 Magazine chest construction.

(a) Magazine chests shall be of watertight metal construction with flush interior. The body and lid shall have a minimum thickness of $\frac{1}{8}$ inch.

(b) Permanent sun shields shall be provided for sides and top including the lid. These shall have a minimum thickness of $\frac{1}{8}$ -inch aluminum or 16-gage steel. Side shields shall be offset from the body a distance of 1 inch. The top shield shall be offset a distance of $1\frac{1}{2}$ inches. Sun shields may be omitted when chests are installed "on deck protected," shielded from direct exposure to the sun.

(c) Chests shall be limited to a gross capacity of 100 cubic feet.

(d) Chests shall be secured to the vessel's structure by means of permanently installed foundation clips or bolts or a combination thereof. Lashings will not be acceptable.

(e) Chests shall be provided with substantial hasps and staples for locking purposes.

§ 194.10-25 Ventilation.

(a) *Integral magazines.* (1) All integral magazines shall be provided with natural or mechanical ventilation. Design calculations shall be submitted demonstrating that the system has sufficient capacity to maintain the magazine temperature below 100 °F. with 88 °F. weather air. Mechanical cooling may be used where ventilation requirements exceed 1,500 cubic feet per minute.

(2) Ventilation systems shall be of watertight construction and shall serve no other space. Weather cowls shall be provided with a double layer of wire screen of not less than $\frac{1}{8}$ -inch mesh. Metal watertight closures shall be provided for use when the ventilation system is not in operation. A 2-inch IPS bypass with check valve shall be provided in parallel with at least one of

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the ventilation closures to prevent pressure buildup.

(b) *Magazine vans.* (1) All magazine vans shall be provided with natural ventilation sufficient to maintain the inside air temperature below 130 °F. with an assumed outside temperature of 115 °F.

(2) Ventilation supply weather openings shall be located at least 6 feet above the deck. Exhaust terminals shall be located in the van overhead. Louvers or weather cowls with a double layer of wire screen of not less than $\frac{1}{8}$ -inch mesh shall be provided for protection of weather openings.

§ 194.10-30 Magazine sprinklers.

(a) *Sprinkler system required.* (1) A manual control, hydraulic control, or automatic sprinkler system shall be installed in each magazine or magazine group. The control valve shall generally be in accordance with Specification MIL-V-17501 insofar as materials and test fittings are concerned. All systems shall be remotely operable from a control station on the freeboard deck and manually operable at the control valve location.

(2) Where automatic systems are installed sprinkler heads shall be of the open head design so as to permit either manual or automatic operation.

(3) Sprinkler systems shall be designed in accordance with the requirements of part 76 of Subchapter H (Passenger Vessels) of this chapter. Minimum total system capacity shall be based on 0.8 gallon per minute per square foot of overhead area.

(4) The normally required fire pumps may be used for magazine sprinkling purposes. However, the use of the magazine sprinkling system shall not interfere with the simultaneous use of the fire main system.

(b) *Magazine vans.* (1) A manual control sprinkler system shall be installed in each magazine van. The system shall be connected to the nearest fire main outlet by jumper hose. The hose shall be protected from physical damage by a grating or similar arrangement. The fire station valve shall serve as the sprinkler control valve.